



Group-based Peer Tutoring among University Undergraduate Nursing Students: Enhanced Teaching-Learning Through Group Discussion

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¹This paper, which was completed in the first author's senior year, was based on the implementation of a group tutoring program for a beginning undergraduate nursing course, Nursing 3360: Pathophysiology. The program was implemented in May of 2019 in collaboration with Dr. Margaret Bultas, who also served as the faculty member for Nursing 3360. Dr. Bultas assisted with manuscript revisions and the group tutoring program for the Pathophysiology course. Revisions were made in the spring of 2020 by all authors

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Abstract

Student-led peer tutoring, a system in which both the tutor and the tutee are students, has existed since the time of Aristotle and is becoming more common in nursing educational settings in the United States, particularly as the nursing faculty shortage continues to increase. The typical peer tutoring model utilized is individual tutoring in which a fellow student guides or instructs a single student in a highly individualized lesson. Although the individual tutoring model has significant benefits for both the student tutor and the student tutee, there is often minimal opportunity for discussion, limiting comprehensive understanding of the subject matter. By contrast, the group model of peer-based tutoring allows for students to engage in discussion with each other, using the collective knowledge of the group in order to clarify gaps in individual understanding. The purpose of this paper is to describe the many benefits of group-based student peer tutoring for both the tutors and tutees, and thereby promote this approach to enhance teaching-learning for undergraduate university nursing students.

Keywords: Student-led Peer Tutoring, Group model, Undergraduate University Nursing program

A few minutes into my third review session for a Pathophysiology class at the School of Nursing, this one on cardiovascular disorders, I was bored by the sound of my own voice. I was not alone in my boredom; the group of ten students in the room was split between those staring glassy-eyed at the diagram on the board and those frantically writing down every word I said without processing any of it. Tired of being the only one talking and desperate to have some type of interaction with the group, I started asking questions. Silence. No one would answer, so much to the students dislike, I began to call on students whose names I knew. After another session or

two of painfully awkward silences and calling on unsuspecting students, the students finally started to respond on their own and the discussions started! Much to my surprise, instead of merely talking about pathologic processes, individuals were sharing personal experiences, asking questions, and correcting each other's misinformation. I was no longer the drone or the figure in the front of the room; instead, I was guiding the discussion. I could simply ask a question, let the students reveal their own knowledge, and guide the conversation. I had empowered them and they were thinking on their own (First Author's early recollection) .

Background

Student-led peer tutoring, is recognized as one of the best ways to reinforce knowledge (Brown, Curtis, & Harris, 2019). The origins of student-led peer tutoring began with Aristotle and it was first implemented in European schools in the early 19th century (Srivastava & Rashid, 2018). More recently, here in the United States, student-led peer tutoring in schools of nursing has become more common given the increasing demand for nurses in clinical settings and the ongoing nursing faculty shortage (American Association of Colleges of Nursing, 2017). Peer tutoring has often been broadly defined as “a collaborative intervention in which individuals, who are not professional teachers from similar settings, help each other learn through teaching” (Li, Petrini, & Stone, 2018). In the case of student-led peer tutoring models, more experienced students help guide and work with less experienced students on concepts important in their studies. Although several methods of peer tutoring exist, the most common ones fall into the categories of either individual tutoring or group tutoring. Individual, one-on-one tutoring is designed for students who face significant challenges mastering content or who have difficulty engaging in group learning (Blowers, Ramsey, Merriman, & Grooms, 2003). Students using one-on-one tutoring may have few academic skills, and they can utilize individual tutoring to help expand their repertoire of academic skills thus preparing them for future learning (Blowers et al., 2003). Group tutoring, on the other hand, allows the tutor to engage students in a more dynamic manner and draw on the knowledge of each student present. Instead of the student tutor answering all the questions, the students as a group can exchange ideas with the tutor and with each other, thereby facilitating a more informative discussion (Blowers et al., 2003). In university settings, student-led peer tutoring models are used to provide more opportunities for students to engage and interact with the content.

Benefits of Peer Tutoring in General

The system of student-led peer tutoring, both group and individual, confers benefits on both the student tutor and student tutee. For tutors, a major benefit gained from the process of peer instruction is enhanced comprehension of the subject matter (Li et al., 2018). As student tutors go through the process of explaining content to a student tutee at an earlier stage in the program, they are forced to confront gaps in their own understanding and may end up strengthening their own comprehension of the subject matter (Loke & Chow, 2007). According to Li et al. (2018), being forced to critically reconsider their own learning and understanding when students pose questions they have not previously thought of, helps reinforce the student tutors' own understanding of the subject matter.

The benefits to the student tutee, who is receiving the instruction, are clear. Peer tutoring offers tutees a chance to review difficult material with a student who more recently went through the process of learning the course material. This provides tutees with opportunities to hear about how the material can be applied later in the course of study. Since student tutors have successfully completed the course themselves, they offer a perspective that is different than that of the professor.

Approaches to Group Tutoring

Student-led peer group tutoring is structured similarly to individual student-led tutoring. The difference is, instead of working one-to-one with a student, the tutor works with anywhere from three to twenty students in one session (Blowers et al., 2003). Due to the larger number of students present during the session, the group tutoring format provides opportunities for students to learn from each other with the student tutor serving more as a moderator guiding the session rather than as the single source of information; this allows students to actively participate in gaining new knowledge (Li, Petrini, & Stone, 2018).

Student-led peer group tutoring can be an effective tool to facilitate a more profound understanding of material and concepts among students by allowing students to learn from each other through discussion (Versteeg, Blankenstein, Putter, & Steendijk, 2018). Group tutoring can have varying sizes including dyad, small group, large group (Blowers et al., 2003). Dyad (two students), small group (three to six students), and large group (more than six students) differ only in the number of students involved and can be used to cover a large variety of content areas. As the number of students in the peer group increases, a more dynamic learning process can develop as tutor and students are able to build off each other's knowledge (Blowers et al., 2003). Group tutoring can also vary in structure. Skills-based tutoring is a way for students to receive support in reviewing specific psychomotor skills. Question-based tutoring is an unofficial type of tutoring in which student tutees ask specific questions of the student tutor (Blowers et al., 2003). While there are various forms of group tutoring, all group tutoring works to enhance understanding among students through collaboration.

In a group tutoring session, instead of lecturing, for example listing off the symptoms of congestive heart failure, the student tutor poses a question to the group, such as: "What are some symptoms of heart failure?" If one student tutee names some but not all the symptoms, other students can contribute by answering and providing the missing information. This form of discussion not only clarifies information, but also serves to increase confidence in students as they begin to realize that, collectively, they have a substantial knowledge base (Brannagan et al., 2013). By facilitating these group discussions, rather than attempting to re-lecture the material, student tutors can illuminate gaps in understanding. In the heart failure example, one student tutee may successfully name left ventricular hypertrophy as a symptom. The logical next question may be to ask why the student thinks left ventricular hypertrophy is a symptom of heart failure. By engaging in a group discussion about heart failure, rather than listening to a student tutor explain each individual symptom, student tutees can correct their own misinformation and deepen their understanding of the topic (Versteeg et al., 2018). Being part of a group allows

students to build on one another's knowledge to come to a logical and complete answer as to why left ventricular hypertrophy often occurs in a patient with heart failure. The group discussion allows everyone, including the student tutor, to potentially walk out of a session with a rich and perhaps more complete understanding of the topic covered.

Supervision of Peer Tutors

A major concern regarding the utilization of students as tutors is the variable quality of their ability to accurately convey the course content. The fact that a student obtained a grade of a B or higher in a course does not necessarily mean that student can effectively teach the course material. Therefore, a comprehensive training and evaluation program must exist for student tutors. Establishing an effective method of evaluation, however, is complicated by the fact that different types of students prefer different styles of tutoring (Pinto, Rendas, & Gamboa, 2001). Tutoring workshops and coaching from more experienced student tutors have demonstrated effectiveness in improving a tutor's overall performance (Garcia, James, Bischof, & Baroffio, 2017). An effective tutor must possess adequate knowledge of course content but must also have adequate knowledge regarding small group facilitation (Baroffio et al., 2006). As facilitation is an underdeveloped skill in many students, workshops may be helpful in developing these skills in student tutors. These workshops and other formal trainings can be provided by faculty members or supports provided by the university or college (Blowers et al., 2003). Workshops to support the development of the student tutors have been shown to help develop teaching strategies as well as improve the tutor's skill in guiding and helping students (Baroffio et al., 2006).

Although workshops help build a foundation for student-led tutoring, regular feedback and evaluation is necessary to ensure tutors continue to effectively lead and guide student tutees in the sessions. Peer coaching, or peer observation, is a strategy used to improve teaching skills (Baroffio et al., 2006). Peer observation is a collaborative process in which student tutors watch each other teach and discuss what was observed (Bell & Mladenovic, 2007). This collaborative approach allows both the student tutor and the student observer to improve their own teaching techniques. A second benefit to student observation is that peer-peer ratings and evaluations of a tutoring session have been found to be more reliable than a tutor's self-rating of a session, thereby affording a more consistent indicator of a tutor's performance (Garcia et al., 2017). A combination of both workshops and student observation provides the best method to ensure tutor effectiveness as skills taught in workshops are not always effectively implemented in actual tutoring sessions (Bell & Mladenovic, 2007). Student observation provides a way to identify gaps in performance and ensure the skills provided in tutoring workshops are implemented in tutoring sessions.

Conclusion

There are many benefits to student-led tutoring, both individual and group. Having worked as an individual tutor, the first author has seen the impact it can have on an individual's academic success. The impact she saw as a group tutor, however, was more profound. Not only did students gain a more detailed understanding of pathophysiology, they also developed an

academic peer group that could serve as a resource and support for them over the next few semesters of nursing school. The concepts of teamwork and camaraderie that commenced during the group tutoring sessions may provide a basis for collaboration once these students begin working as bedside nurses.

Nursing has been described as a profession centered around life-long learning because of the depth and breadth of knowledge and critical thinking skills required. Thus, it is essential that a nurse possess strong collaboration skills. The development of skills and practice of learning from, and with, others to strengthen one's own knowledge is beneficial not only in the classroom, but also at the bedside. Following Brannagan et al. (2013), we believe that strong relationships among nursing students can contribute to strong relationships and mentorships among coworkers in clinical practice. The ability to ask questions of colleagues and problem-solve as a team has the potential to create a more cohesive healthcare team and result in better patient care overall. Student-led group tutoring creates an environment where students can begin to develop these critical skills that are not explicitly taught in the classroom. Furthermore, it offers an efficient manner by which to provide academic support to many students at a time where nursing school enrollment is high and nursing faculty are few.

Student-led peer tutoring helps provide additional opportunities for students to seek help. It can be a useful model of peer instruction that can be implemented in nursing programs nationwide. Further research is needed to fully understand the impact of student-led group tutoring on nursing students because of the limited number of studies done to evaluate the effects of peer group tutoring in nursing school specifically. However, the benefits of student-led peer group tutoring in general are well supported.

Funding

The Student-led Group Student Tutoring Program is financially supported by Saint Louis University Student Success Center.

Promissory Note

This manuscript has never been published and is free from plagiarism.

References

- American Association of Colleges of Nursing. (2017). *Nursing Faculty Shortage Fact Sheet*. Retrieved from <https://www.aacnnursing.org/Portals/42/News/Factsheets/Faculty-Shortage-Factsheet.pdf>.
- Baroffio, A., Nendaz, M. R., Perrier, A., Layat, C., Vermeulen, B., & Vu, N. V. (2006). Effect of teaching context and tutor workshop on tutorial skills. *Medical Teacher*, 28(4), 112–119. doi:10.1080/01421590600726961.
- Bell, A., & Mladenovic, R. (2008). The benefits of peer observation of teaching for tutor development. *Higher Education*, 55(6), 735–752. doi:10.1007/s10734-007-9093-1.

- Blowers, S., Ramsey, P., Merriman, C., & Grooms, J. (2003). Patterns of peer tutoring in nursing. *Journal of Nursing Education*, 42(5), 204–211.
- Brannagan, K. B., Dellinger, A., Thomas, J., Mitchell, D., Lewis-Trabeaux, S., & Dupre, S. (2013). Impact of peer teaching on nursing students: Perceptions of learning environment, self-efficacy, and knowledge. *Nurse Education Today*, 33(11), 1440–1447. doi: 10.1016/j.nedt.2012.11.018.
- Brown, L. G., Curtis, A., & Harris, L. C. (2019). Improving dose calculation pass rates with peer tutoring. *Journal of Nursing Education*, 58(3), 188. doi:10.3928/01484834-20190221-15.
- Ford, C. R., Wilkins, E. B., & Groccia, J. E. (2018). Students engaged in teaching. *New Directions for Teaching and Learning*, 2018(154), 33–43. doi: 10.1002/tl.20289.
- Garcia, I., James, R. W., Bischof, P., & Baroffio, A. (2017). Self-observation and peer feedback as a faculty development approach for problem-based learning tutors: A program evaluation. *Teaching and Learning in Medicine*, 29(3), 313–325. doi: 10.1080/10401334.2017.1279056.
- Li, T., Petrini, M. A., & Stone, T. E. (2018). Baccalaureate nursing students perspectives of peer tutoring in simulation laboratory, a Q methodology study. *Nurse Education Today*, 61, 235–241. doi:10.1016/j.nedt.2017.12.001.
- Loke, A. J. Y., & Chow, F. L. (2007). Learning partnership—the experience of peer tutoring among nursing students: A qualitative study. *International Journal of Nursing Studies*, 44(2), 237–244. doi:10.1016/j.ijnurstu.2005.11.028.
- Pinto, P. R., Rendas, A., & Gamboa, T. (2001). Tutors performance evaluation: A feedback tool for the PBL learning process. *Medical Teacher*, 23(3), 289–294. doi:10.1080/01421590120048139.
- Srivastava, R., & Rashid, M. (2018, August). Who is at Edge—Tutors or Tutees? Academic, Social and Emotional elevation through Peer Tutoring. In *Arab World English Journal (AWEJ) Proceedings of 1st MEC TESOL Conference*.
- Versteeg, M., Blankenstein, F. M. V., Putter, H., & Steendijk, P. (2018). Peer instruction improves comprehension and transfer of physiological concepts: A randomized comparison with self-explanation. *Advances in Health Sciences Education*, 24(1), 151–165. doi: 10.1007/s10459-018-9858-6.